

281 POLICY ON PESTICIDES AND RELATED CHEMICALS: USE AND EXPERIMENTATION

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INTRODUCTION

The University of California Division of Agriculture and Natural Resources conducts research, performs extension activities, publishes pest management guidelines, and makes recommendations on the safe and efficacious use of pesticides and related chemicals.

Any such activities are to be conducted in accordance with all applicable laws and regulations.

To insure the safety of persons potentially exposed to experimental uses of pesticides, microbial pesticides and spray adjuvants, the University, in consultation with the Director of the California Department of Pesticide Regulation (DPR) has adopted the following policy Pursuant to Title 3, California Code of Regulations, Sections 6260 and 6268.

Under Title 3, California Code of Regulations (CCR), Section 6268, Research Authorization, persons employed by colleges and universities who will be conducting pesticide research are exempt from obtaining written authorization for their research provided the college or University has a policy covering experimental pesticide use which has been approved by the Director of the California Department of Pesticide Regulation (DPR).

I : SCOPE AND DEFINITIONS

A. SCOPE

1. This policy on experimental pesticide use applies to all employees of the Division of Agriculture and Natural Resources (DANR) who use or handle pesticides for experimental purposes. This policy applies to experimentation with pesticides or related substances (or mixtures of substances) in any field test or field demonstration.
2. This policy applies to experimental pesticide research, on any campus, field station, agricultural research and extension center, and on any other land or treated site (including livestock) when used in experimental pesticide research field trials and demonstration operations that are activities of the University. Noncompliance with this policy will result in the loss of the exemption provided under Title 3 CCR, Section 6268, and may be deemed to be a violation of Section 6260.
3. This policy does not include the use of a registered pesticide with the intent to provide pest control according to the pesticide label and where the pesticide is not being used as an integral part of research.

B. DEFINITIONS

1. Pesticide - A "Pesticide" is any chemical or biotic agent used or intended for use for pest control, or any chemical or microbial agent that is being used with the intent of testing in any field test. Pesticide includes any substance, or mixture of substances which is intended to be used for defoliating plants, regulating plant growth, or for preventing, destroying, repelling, or mitigating any pest which may infest or be detrimental to vegetation, humans, animals,

or households, or be present in any agricultural or nonagricultural environment whatsoever.

2. Experimental Pesticide - "Experimental pesticide" includes new formulations of existing products, new products containing old active ingredients, or applications to any crop or site not on the California-registered label, or the use of any spray adjuvant not registered in California.
3. Experimental Pesticide Use - Experimental pesticide applications are made for research purposes only, and no pest control benefit is intended or expected. Such applications must conform to State and Federal guidelines. For example, under 40 Code of Federal Regulations (CFR) 172.3, field trials on a total area of no more than 10 acres per pest will not require a federal experimental use permit. Uses which are registered with U.S. EPA but which are still experimental in California must conform to a guideline of 100 acres per crop.
 - a. An experimental pesticide use is any pesticide application made either:
 1. In the absence of a California-registered label for the compound, substance, or product,
 - or
 2. In conflict with the California-registered label for the product being tested.
 - b. Some uses that are **not** considered to be in conflict with the label are listed in the California Code of Regulations, Sec. 6000. These include applications at lower than label rates, less frequent application intervals, tank mixes (unless specifically prohibited on the label), and use against pests not listed or prohibited on the label, provided all other label directions are followed.
4. Employee of the University of California
 - a. For purposes of this policy, an "employee" of the University of California shall be defined as any person whose current University of California position description or Agricultural Experiment Station project description includes responsibilities for pest management research and demonstration.
 - b. For purposes of this definition, persons holding an emeritus title are not employees of the University of

California unless they are currently working on an official recall basis and operating under an approved position description or Agricultural Experiment Station project for pest management.

5. Supervisor

For purposes of this policy, "supervisor" shall be defined as an employee of the University of California working as a researcher, project leader, Principal Investigator or designated representative responsible for execution of any pesticide research project, employee training, or pest control procedure.

6. University Property

For purposes of this policy, "University property" is land owned or controlled by the University of California and includes only property over which the University maintains day-to-day control to such an extent that a reasonable presumption can be made that experimentally treated commodities will not be harvested or removed from the premises without authorization of the supervisor. Property under the day-to-day control of individuals and institutions other than the University of California is not included in this definition.

7. Pesticide Research and Pesticides Used for Experimentation

"Research" using pest control chemicals can consist of either experimental pesticide applications, or applications made strictly in accordance with California registered labels, or both. If experimental pesticide uses are involved, the use must follow either this policy or the requirements and procedures of the DPR Research Authorization Program.

8. Pest Control

Pesticide applications that are made for pest control purposes rather than research purposes cannot be experimental and must be made in accordance with California-registered labels and all applicable laws and regulations.

9. Destroyed

"Destroyed" means rendered unfit for utilization as human or animal food or feed.

10. Tolerance

"Tolerance" is the maximum pesticide residue level that can legally remain on a commodity at the time of harvest, as defined in Title 40 Code of Federal Regulations, Part 180.

11. Field Test

"Field Test" means pesticide experimentation outside of the research laboratory or research greenhouse.

C. REFERENCES

1. Title 3, California Code of Regulations (3 CCR) and the Food and Agricultural Code (FAC).
2. Department of Pesticide Regulation Pesticide Safety Information Series.
3. Title 40 Code of Federal Regulations, Parts 150 to 189.

II: RESPONSIBILITIES INCURRED BY EMPLOYEES OF THE UNIVERSITY OF CALIFORNIA WHEN EXPERIMENTING WITH PESTICIDES OUTSIDE OF THE RESEARCH LABORATORY

A. GENERAL

Supervisor Responsibilities

It is the duty of the University and the supervisor to provide a safe work environment and provide training to persons working under their direction. Training must include information on pesticide hazards and safety as well as laws and regulations applicable to all activities they may perform. The supervisor is responsible for ensuring that pesticides are used in accordance with State and Federal laws, regulations, and label requirements. Supervisors shall make their employees aware of the hazards of the chemicals and pesticides being used for experimentation. Supervisors shall use the pesticide label as a guide to employee training. In the absence of a registered label, supervisors shall use the Material Safety Data Sheet as a guide to training and personal protective equipment requirements.

B. SAFETY REQUIREMENTS

1. Entry after Application

No person shall enter any area treated with a pesticide unless he or she follows the labeling directions for entry activities. State reentry regulations may be more restrictive than those stated on the label. In all cases the most restrictive reentry regulations shall be followed.

For entry in the absence of a label or labeling, the following conditions must be met:

- a. Do not enter treated areas for 4 hours after application unless protected (as per II. B. 3). After 4 hours, anyone entering the area must wear shoes and socks, a long sleeved shirt, and long pants.
- b. Non-agricultural and Urban Areas. Persons shall not enter areas treated with liquid formulations for 2 hours after application and until the treated area has dried. When using baits, dusts and other dry formulations, persons should not enter the area during the application. Standard industry care and practice should be observed.

2. Posting Treated Plots

- a. To ensure the safety of persons entering an area treated with experimental pesticides, the treated area shall be posted in accordance with any applicable pesticide label.
- b. Non-agricultural and Urban Areas. The owners or residents of the treated property shall be provided with a notification of treatment indicating the nature of the treatment, time and date of treatment, and any special instructions regarding re-entry or use after treatment.
- c. In plots treated with materials requiring restricted entry intervals

under 3CCR section 6772, re-entry intervals must be posted.

3. Personal Protective Equipment (PPE) for Unregistered Pesticides

In the absence of PPE requirements on a registered pesticide label, the following minimum requirements shall apply:

- a. Equivalent to Category I for eye or skin damage. Potentially exposed persons must wear protective eyewear and chemical resistant gloves when handling Category I chemicals.
- b. Equivalent to Category I for systemic toxicity. Potentially exposed persons must use personal protective equipment as described in 3 CCR, Section 6793 and applicable portions of Section 6738, as revised.

4. Unidentified or Unlabeled Pesticides

Pesticides of unknown toxicity shall be stored, transported, handled, and disposed of according to the standards established by State and County regulations for Category I Pesticides.

C. ENVIRONMENTAL CONSIDERATIONS IN DETERMINING PLOT LOCATIONS

1. The supervisor shall consider the potential consequences of any proposed experimental use of pesticides, paying particular attention to proximity to:
 - a. Areas of frequent human activity or habitation
 - b. Bodies or sources of water
 - c. Wildlife management areas
 - d. Critical habitats of rare or endangered species
 - e. Livestock and crops

2. All research applications will be made in a way that minimizes adverse environmental impacts.

D. PESTICIDE USE RECORD-KEEPING AND REPORTING

1. For each experimental pesticide application, the supervisor shall keep a record of:
 - a. Location of site
 - b. Plot size and total area treated
 - c. Each commodity, crop, or site treated
 - d. Pest species of concern
 - e. Pesticides applied
 - f. Date of application
 - g. Application method
 - h. Concentration and volume of pesticide applied
 - i. Date commodity was destroyed (when required)
 - j. Name of grower, where applicable.
2. The records shall be retained by the supervisor, the supervisor's campus departmental office, or the appropriate county Cooperative Extension office for at least two years after the final pesticide application. Such records shall be made available upon request to the county agricultural commissioner or DPR.

E. CROP CONTROL, DISPOSITION, AND DESTRUCT NOTIFICATION REQUIREMENTS FOR TREATED COMMODITIES

1. Under State and Federal law, commodities treated with any experimental pesticide for which there is no pesticide residue tolerance or tolerance exemption cannot enter the channels of trade or in any way be made available for use as a human or animal food or feed.
2. The supervisor has primary responsibility to ensure that the treated commodity is posted and destroyed.

3. Any site treated with an experimental pesticide on a commodity for which no pesticide residue tolerance, or exemption from tolerance, has been established shall comply with the following requirements:
 - a. Prior to the application, a sign shall be posted at each corner of the experimental plot with the words, "Commodity treated with experimental pesticide, do not harvest." The signs shall be in English and Spanish, and of a size so the wording is readable to a person with normal vision, from a distance of 25 feet. Signs will remain in place until treated crop is destroyed.
 - b. All parts of the treated commodity potentially suitable for use as human or animal food or feed and not removed from the site for research purposes shall be destroyed.

4. Pesticide Application and Notification Requirements for Trials Conducted Off University Property

At least 24 hours prior to commencement of any experimental pesticide trial on property not owned or controlled by the University, the supervisor shall submit to the county agricultural commissioner and grower a copy of a document (see Appendix I) that shall include the following information:

- a. Supervisor name, address, phone number and date of report
- b. Qualified Applicator Certificate Number
- c. Experimental pesticide to be applied and U.S. EPA Registration number, if applicable. If the U.S. EPA number is not available, use the chemical name or experimental number from the Material Safety Data Sheet.
- d. Location of experimental trial (grower or ranch name address and site identification number)
- e. Size of trial (acres or rows)
- f. Commodity or site to be treated
- g. Anticipated date of first and last applications
- h. Intended disposition of treated crop (harvest or destruction)

- i. Date of anticipated harvest or destruction of the treated commodity if applicable
 - j. Signature of supervisor responsible for the application and crop destruction
- 5. In the event a treated commodity is harvested and potentially made available for human or animal consumption where no pesticide residue tolerance exists, or where the residue is likely to be in excess of the tolerance, persons conducting the research shall immediately notify the County Agricultural Commissioner, the grower, the California Department of Pesticide Regulation and the University of California Division of Agriculture and Natural Resources. CE Specialists and AES faculty shall notify the Department Chair. CE Advisors shall notify the County Director. Chairs or County Directors will then notify appropriate Deans or Regional Directors.
- 6. Food or feed treated with pesticides registered for application on the test site and applied at or below the registered label rates may be harvested and allowed to enter the food marketing chain, provided all other label and State regulatory conditions are met.

F. MICROBIAL PESTICIDES

The U.S. Environmental Protection Agency generally requires a notification or a federal experimental use permit for any experimental program involving the deliberate release into the environment of living, genetically engineered microbial pesticides, irrespective of the acreage involved in the experiment (see 40 CFR sec. 172.45 for exemptions).

The DPR Pesticide Registration Branch must also be notified of any proposed field testing (on or off University property) by University personnel involving genetically engineered microbial pesticides.

III: REQUIREMENTS OF SELECTED CALIFORNIA PESTICIDE LAWS, REGULATIONS AND UNIVERSITY OF CALIFORNIA DANR POLICIES NOT SPECIFICALLY RELATED TO EXPERIMENTAL USE

A. EMPLOYEE RIGHTS

Under 3 CCR, Section 6704, Application of Labor Code, employees have the right to:

- 1. File confidential complaints alleging unsafe work conditions.
- 2. Prompt investigation of complaints.
- 3. Talk to inspectors or compliance officers, and point out hazards during the inspection process.
- 4. Be notified of any relevant job hazard.

5. Not be subject to any retaliation or discrimination because they have filed any complaint regarding an unsafe work condition.

B. QUALIFICATIONS OF PERSONS SUPERVISING PESTICIDE APPLICATIONS

Persons directly supervising pesticide applications shall hold the Qualified Applicator Certificate (QAC). It is recommended that employees whose responsibilities include applying pesticides be certified as a Qualified Applicator (QAC).

C. STORAGE, TRANSPORTATION, AND DISPOSAL OF PESTICIDES

1. Control of Pesticides, Containers, and Equipment

Containers or equipment that hold or have held pesticides shall not be stored, handled, emptied, disposed of, or left unattended in such a manner that they may present a hazard to persons, animals, food, feed, crops, or property.

2. Storage and Delivery

- a. The supervisor is responsible for all containers or equipment on the work site that hold or have held a pesticide. The supervisor shall either:
 1. Store all containers or equipment in a locked enclosure, or
 2. Provide a responsible person to maintain control over the containers at all times.
- b. When not being used, all pesticide containers (regardless of the amount of pesticide they contain) shall have lids and closures securely fastened.
- c. Pesticides shall not be delivered to any property unless they are stored or controlled as required above.

3. Posting of Pesticide Storage Areas

All areas where pesticides or their used containers are stored shall be posted with warning signs as required by California regulations (3CCR, 6674). For unregistered pesticides and related chemicals, the Material Safety Data Sheet shall be used to determine the appropriate warning sign for posting.

4. Container Label Requirements

The manufacturer's label shall not be removed from any pesticide container.

5. Service Containers

All service containers (containers other than those bearing the registered pesticide label), regardless of size, shall be labeled with the following information:

- a. Signal word from pesticide label if available (Danger, Warning, Caution)
- b. Name of pesticide
- c. Name of manufacturer
- d. Name of active ingredient (or manufacturer's code number)
- e. Name, address, and telephone number of the person responsible for the demonstration, application, or research

6. Prohibited Service Containers

Pesticides shall not be placed or kept in any container commonly used for food, drink, household products, or feed.

7. Transportation Requirements

- a. Pesticides shall not be transported in the same compartment with persons, food, or feed, except small amounts may be transported in their original Federal Department of Transportation-approved containers.
- b. Pesticide containers shall be secured to vehicles during transportation in a way that will prevent spillage onto or off the vehicle. Paper, cardboard, and similar containers shall be covered when necessary to protect them from moisture.

8. Container Rinsing Requirements

Each emptied container that has held less than 28 gallons of a liquid pesticide diluted for use shall be rinsed by the user at the time of use by the triple-rinse method or another rinse method approved by DPR.

9. Pesticide Disposal

All undiluted, excess pesticides will be disposed of in accordance with State and Federal laws and regulations, or in accordance with the requirements stated on the label.

10. Closed Pesticide Transfer System

Closed pesticide transfer systems must be used when required by State regulation. The requirement for closed transfer does not apply to employees of research units developing and testing new pesticides or new uses of pesticides, if employees handle one gallon or less of such pesticides per day in the original container. For individuals who handle over one gallon of pesticides in toxicity Category I, a closed system must be used to transfer, mix, or load in accordance with 3 CCR, Section 6746, Closed Systems.

11. Unregistered Pesticides

All experimental and unregistered pesticide chemicals shall be stored and transported in labeled containers of a type appropriate to assure safety in handling.

D. SAFETY CONSIDERATIONS DURING APPLICATIONS

1. Personal Safety

To ensure safe work practices for employee who mix, load, apply, store, or otherwise handle pesticides, or who are exposed to residues of pesticides after application, the following work practices and safety requirements shall be met:

- a. **Age.** Persons under the age of 18 shall not mix, load, or apply pesticides.
- b. **Instruction and training.** The supervisor shall provide training for each employee handling pesticides. This training shall include:
 1. The potential hazards involved for each pesticide used
 2. Safety procedures to be followed

3. Clothing and protective equipment to be used based on section II. B. 3. of this policy.
 4. Common symptoms of pesticide poisoning and ways poisoning can occur
 5. Medical supervision requirements
 6. Applicable laws, regulations, and label requirements
- c. **Timing and record of instruction and training.** Instruction shall be completed before the employee is allowed to handle pesticides and at least annually thereafter. The supervisor shall maintain a permanent record of the date and extent of instruction given.
- d. **Emergency medical care.** The supervisor shall make prior arrangements for emergency medical care as required by 3 CCR 6726.
- e. **Medical supervision.** The supervisor shall provide medical supervision in the form of a written agreement with a licensed physician for any employee who regularly handles any Category I or II pesticide containing an organophosphate or carbamate for an agricultural use. This medical supervision shall meet the requirements of the 3 CCR 6728.
- f. Other general pesticide use and handling requirements. The supervisor shall meet the requirements of state regulations for:

1. Working alone with pesticides
2. Clothing change area
3. Mixing and loading site requirements
4. Work clothing
5. Protective equipment
6. Adequate light
7. Servicing equipment
8. Equipment specifications
9. Possession of Material Safety Data Sheet

E. RESTRICTED MATERIALS PERMIT

1. In accordance with State law and regulations, employees of the University must possess (or be operating under) a restricted materials permit when possessing, using, or applying any restricted material for pest control purposes.
2. The potential groundwater contaminating chemicals listed in 3 CCR 6800(a) may be applied for research or experimental purposes **only pursuant to a valid research authorization (3 CCR 6416)**. The applicant must identify the location of the research or experimental site with the research authorization request. The University research exemption from the requirement for a Research Authorization (3 CCR 6268) **does not apply** when these potentially groundwater polluting chemicals are used for research or experimental purposes.
3. Under 3 CCR, Section 6414(d), Permit Exemptions, except as described in E.,2., above no permit is required for restricted materials used only for experimental or research purposes, when possessed or used by or under the supervision of research personnel from colleges provided the college or university has a policy covering experimental pesticide use which has been approved by the Director,DPR.

F. PESTICIDE GUIDELINES, RECOMMENDATIONS, AND RESEARCH RESULTS

1. Published UC Pesticide Guidelines shall conform to usage prescribed by labels registered by the U.S. Environmental Protection Agency and DPR and must be reviewed by Office of Pesticide Information and Coordination (OPIC), DANR. See also Section 285 of the DANR Administrative Handbook.
2. Pesticide use recommendations shall conform to usage prescribed by labels registered by the U.S. Environmental Protection Agency and DPR and must be made in writing.
 - a. According to State law, recommendation means the giving of any instruction or advice on any agricultural use as to any particular application on any particular piece of property.
 - b. A person making a written recommendation does not incur an obligation to ensure that the actual use follows his or her recommendation.
 - c. Under State law, no person shall act as an agricultural pest control adviser without first having secured an agricultural pest control adviser license. However, University of California personnel engaged in official duties relating to agricultural use are exempt from the requirement for an agricultural pest control advisor license, provided that any recommendation by any such person as to any particular application on any particular piece of property shall be in writing.
 - d. According to State law, a written recommendation is required when UC personnel are engaged in official duties relating to agricultural use (of pesticides) and when they give any instruction or advice on a particular application on a particular piece of property.
 - e. UC employees exempt from the PCA license requirements who are familiar with the property and are in doubt as to whether or not a written recommendation is needed should write a recommendation. Those who are in doubt whether or not they are familiar with the property should either visit the property or state that their knowledge of the property is not adequate to make a pesticide use recommendation for that particular property.

- f. Written pesticide recommendations should identify pesticides by official common name; when necessary, brand names may be used (UC/DPR agreement).
3. Published or otherwise presented results, descriptions and demonstrations of experiments in which pesticides are used in a manner that does not conform with registered uses shall be clearly identified as experimental results only. Where appropriate, a warning shall be included that similar uses may result in contaminated crops with illegal pesticide residues.

IV: REFERENCES

The State Laws and Regulations covering agricultural pesticide use may be found at <http://www.cdpr.ca.gov>

Site for this Policy: <http://danr.ucop.edu/admin-handbook/200/281pre.html>

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